

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREAT

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 22 January 2004 (22.01.2004)

PCT

(10) International Publication Number WO 2004/008731 A1

(51) International Patent Classification7:

H04M 9/08

(21) International Application Number:

PCT/IB2003/002863

(22) International Filing Date: 23 June 2003 (23.06.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 02077868.4

16 July 2002 (16.07.2002)

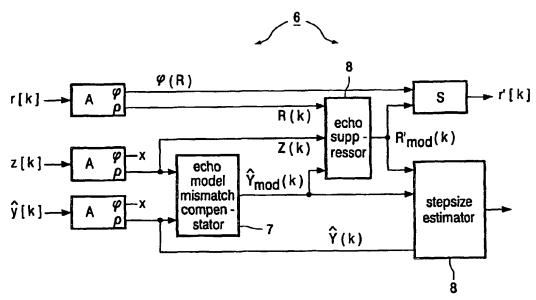
- (71) Applicant (for all designated States except US): KONIN-KLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): ROOVERS, David, A., C., M. [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). DERKX, Rene, M., M. [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). JANSE,

Cornelis, P. [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

- (74) Agent: GROENENDAAL, Antonius, W., M.; Philips Intellectual Property & Standards, Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: ECHO CANCELLER WITH MODEL MISMATCH COMPENSATION



(57) Abstract: An interference canceller is described, comprising an adaptive filter for modeling an interference, such as an echo or noise, and a spectral processor for processing the modeled interference together with near end speech and the interference. The interference canceller further comprises an interference model mismatch compensator coupled to the adaptive filter for providing a mismatch signal to the spectral processor, said mismatch signal showing a speech independent decay. With the model mismatch signal of the interference canceller the interference power spectrum can be estimated very accurately leading to a significant convergence improvement of the acoustic canceller. Especially in the initial convergence phase at the start of a communication session a high quality operation of the acoustic canceller is achieved, which is important as this determines the first quality impression of the user.